

LISTING OF THE CLAIMS

1. (Original) A device for encoding and encrypting data, said device comprising:

a segmenter adapted to receive said data and segment at least a portion of said data into regions;

a scalable encoder coupled to said segmenter, said scalable encoder adapted to scalably encode at least one of said regions into scalably encoded data; and

a progressive encrypter coupled to said scalable encoder, said progressive encrypter adapted to progressively encrypt at least a portion of said scalably encoded data into progressively encrypted scalably encoded data.

2. (Original) The device of Claim 1 wherein said device is coupled to a packetizer, wherein said packetizer is adapted to receive said progressively encrypted scalably encoded data in real time as said progressively encrypted scalably encoded data are output from said progressive encrypter.

3. (Original) The device of Claim 1 comprising:
a storage unit coupled to said progressive encrypter, said storage unit adapted to store said progressively encrypted scalably encoded data.

4. (Original) The device of Claim 3 wherein said device is coupled to a packetizer, wherein said packetizer is adapted to receive at least a portion of said progressively encrypted scalably encoded data stored in said storage unit.

5. (Original) The device of Claim 1 wherein said data are selected from the group consisting of: video data, audio data, image data, graphic data, and web page data.

6. (Original) The device of Claim 1 wherein said segmenter is adapted to receive prediction error video data.

7. (Original) The device of Claim 1 wherein said segmenter is adapted to segment data into rectangular regions.

8. (Original) The device of Claim 1 wherein said segmenter is adapted to segment data into non-rectangular regions.

9. (Original) The device of Claim 1 wherein said segmenter is adapted to segment data into overlapping regions.

10. (Original) The device of Claim 1 comprising:
a video prediction unit coupled to said segmenter, said video prediction unit adapted to generate prediction error video data.

11. (Original) The device of Claim 1 wherein said scalable encoder is adapted to encode said at least one of said regions into scalable data and into header data, wherein said header data provide information corresponding to said scalable data.

12. (Original) The device of Claim 11 wherein said progressive encrypter is adapted to encrypt said header data.

13. (Original) The device of Claim 11 wherein said header data comprise information allowing a transcoder to transcode said progressively encrypted scalably encoded data without decrypting and decoding said progressively encrypted scalably encoded data.

14. (Original) A method for encoding and encrypting data, said method comprising:

- a) receiving said data;
- b) segmenting at least a portion of said data into regions;
- c) encoding at least one of said regions into scalably encoded data; and
- d) encrypting at least a portion of said scalably encoded data into progressively encrypted scalably encoded data.

15. (Original) The method of Claim 14 wherein a packetizer receives said progressively encrypted scalably encoded data in real time.

16. (Original) The method of Claim 14 comprising:

- e) storing said progressively encrypted scalably encoded data in a storage unit.

17. (Original) The method of Claim 16 wherein a packetizer receives at least a portion of said progressively encrypted scalably encoded data from said storage unit.

18. (Original) The method of Claim 14 wherein said data are selected from the group consisting of: video data, audio data, image data, graphic data, and web page data.

19. (Original) The method of Claim 14 wherein said step a) further comprises:

receiving prediction error video data.

20. (Original) The method of Claim 14 wherein said step b) comprises:

segmenting said data into rectangular regions.

21. (Original) The method of Claim 14 wherein said step b) comprises:

segmenting said data into non-rectangular regions.

22. (Original) The method of Claim 14 wherein said step b) comprises:

segmenting said data into overlapping regions.

23. (Original) The method of Claim 14 further comprising:
generating prediction error video data.

24. (Original) The method of Claim 14 wherein said step c) comprises:

encoding said at least one of said regions into scalable data and into header data, wherein said header data provide information corresponding to said scalable data.

25. (Original) The method of Claim 24 comprising:
encrypting said header data.

26. (Original) The method of Claim 24 wherein said header data comprise information allowing a transcoder to transcode said progressively encrypted scalably encoded data without decrypting and decoding said progressively encrypted scalably encoded data.

27. (Original) A computer readable medium having computer readable code stored thereon for causing a device to perform a method for encoding and encrypting data, said method comprising:

- a) receiving said data;
- b) segmenting at least a portion of said data into regions;
- c) encoding at least one of said regions into scalably encoded data; and
- d) encrypting at least a portion of said scalably encoded data into progressively encrypted scalably encoded data.

28. (Original) The computer readable medium of Claim 27 wherein a packetizer receives said progressively encrypted scalably encoded data in real time.

29. (Original) The computer readable medium of Claim 27 wherein said method comprises:

- e) storing said progressively encrypted scalably encoded data in a storage unit.

30. (Original) The computer readable medium of Claim 29 wherein a packetizer receives at least a portion of said progressively encrypted scalably encoded data from said storage unit.

31. (Original) The computer readable medium of Claim 27 wherein said data are selected from the group consisting of: video data, audio data, image data, graphic data, and web page data.

32. (Original) The computer readable medium of Claim 27 wherein said step a) further comprises:
receiving prediction error video data.

33. (Original) The computer readable medium of Claim 27 wherein said step b) comprises:
segmenting said data into rectangular regions.

34. (Original) The computer readable medium of Claim 27 wherein said step b) comprises:
segmenting said data into non-rectangular regions.

35. (Original) The computer readable medium of Claim 27 wherein said step b) comprises:
segmenting said data into overlapping regions.

36. (Original) The computer readable medium of Claim 27 wherein said method further comprises:
generating prediction error video data.

37. (Original) The computer readable medium of Claim 27 wherein said step c) comprises:
encoding said at least one of said regions into scalable data and into header data, wherein said header data provide information corresponding to said scalable data.

38. (Original) The computer readable medium of Claim 37 wherein said method comprises:

encrypting said header data.

39. (Original) The computer readable medium of Claim 37 wherein said header data comprise information allowing a transcoder to transcode said progressively encrypted scalably encoded data without decrypting and decoding said progressively encrypted scalably encoded data.

40. (Original) A method for securely and scalably encoding data, said method comprising:

a) scalably encoding data into scalable data; and
b) progressively encrypting said scalable data to generate progressively encrypted scalable data, wherein said progressively encrypted scalable data is transcodable while said progressively encrypted scalable data remains encrypted.

41. (Original) The method for securely and scalably encoding data as recited in Claim 40 further comprising:

c) packetizing said progressively encrypted scalable data.

42. (Original) The method for securely and scalably encoding data as recited in Claim 40 further comprising:

generating header data that provides information corresponding to said scalable data.

43. (Original) The method for securely and scalably encoding data as recited in Claim 42 further comprising:

encrypting said header data to provide encrypted header data.

44. (Original) The method for securely and scalably encoding data as recited in Claim 43 further comprising:

packetizing said progressively encrypted scalable data and said encrypted header data.

45. (Original) The method for securely and scalably encoding data as recited in Claim 42 further comprising:

packetizing said progressively encrypted scalable data and said header data.

46. (Original) The method for securely and scalably encoding data as recited in Claim 40 wherein said data is selected from the group consisting of: video data, audio data, image data, graphic data, and web page data.

47. (Original) The method for securely and scalably encoding data as recited in Claim 40 further comprising:

segmenting said data into corresponding regions.

48. (Original) A method for securely and scalably encoding data, said method comprising:

a) scalably encoding data into scalable data comprising a plurality of blocks of data; and

b) progressively encrypting said scalable data to generate progressively encrypted scalable data, wherein said progressively encrypting comprises sequentially encrypting said scalable data such that a first portion of said scalable data is independently encrypted and a second portion of said scalable data is encrypted based on said first portion.

49. (Original) The method for securely and scalably encoding data as recited in Claim 48 further comprising:

c) packetizing said progressively encrypted scalable data.

50. (Original) The method for securely and scalably encoding data as recited in Claim 48 further comprising:

generating header data that provides information corresponding to said scalable data.

51. (Original) The method for securely and scalably encoding data as recited in Claim 50 further comprising:

encrypting said header data to provide encrypted header data.

52. (Original) The method for securely and scalably encoding data as recited in Claim 51 further comprising:

packetizing said progressively encrypted scalable data and said encrypted header data.

53. (Original) The method for securely and scalably encoding data as recited in Claim 50 further comprising:

packetizing said progressively encrypted scalable data and said header data.

54. (Original) The method for securely and scalably encoding data as recited in Claim 48 wherein said data is selected from the group consisting of: video data, audio data, image data, graphic data, and web page data.

55. (Original) The method for securely and scalably encoding data as recited in Claim 48 further comprising:

segmenting said data into corresponding regions.

56. (Original) A method for securely and scalably encoding data, said method comprising:

a) scalably encoding original data as blocks of scalably encoded data, said blocks comprising a first block of scalably encoded data that when decoded reconstructs a first version of said original data, said blocks also comprising a second block of scalably encoded data that when decoded in combination with data from said first block reconstructs a second version of said original data;

b) progressively encrypting said first block to generate a first progressively encrypted scalably encoded block; and

c) progressively encrypting said second block in combination with said first block or in combination with said first progressively encrypted scalably encoded block to generate a second progressively encrypted scalably encoded block.

57. (Original) The method for securely and scalably encoding data as recited in Claim 56 further comprising:

d) packetizing said second progressively encrypted scalably encoded block.

58. (Original) The method for securely and scalably encoding data as recited in Claim 56 further comprising:

generating header data that provides information corresponding to said scalably encoded data.

59. (Original) The method for securely and scalably encoding data as recited in Claim 58 further comprising:

encrypting said header data to provide encrypted header data.

60. (Original) The method for securely and scalably encoding data as recited in Claim 59 further comprising:

packetizing said progressively encrypted scalably encoded data and said encrypted header data.

61. (Original) The method for securely and scalably encoding data as recited in Claim 58 further comprising:

packetizing said progressively encrypted scalably encoded data and said header data.

62. (Original) The method for securely and scalably encoding data as recited in Claim 56 wherein said original data is selected from the group consisting of: video data, audio data, image data, graphic data, and web page data.

63. (Original) The method for securely and scalably encoding data as recited in Claim 56 further comprising:

segmenting said original data into corresponding regions.